MADRAS GOVERNMENT MUSEUM

GUIDE TO
THE ANTHROPOLOGICAL EXHIBITS

BY

C. J. JAYADEV

Curator for Anthropology, and Assistant Superintendent (Retired)
Government Museum, Madras-8

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GOVERNMENT OF MADRAS
1964

PRINTED BY THE DIRECTOR OF STATIONERY AND PRINTING, MADRAS, ON BEHALF OF THE GOVERNMENT OF MADRAS
1964

PRICE : 1 *rupee* 5 *naye Paise*

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GUIDE TO THE ANTHROPOLOGICAL GALLERIES.

The life of ancient man in India over a hundred thousand years ago to the beginnings of the historic period is depicted in the Pre-history section of the museum by a wealth of artifacts characteristic of the *stone, copper or bronze and iron ages in succession.* In 1878 Surgeon General G. Bidie, the then Superintendent of the Museum, made Ethnology a museum subject to be illustrated by prehistoric antiquities and ethnographic materials. World famous collections of palaeolithic and neolithic tools, ancient pottery, ornaments, beads, weapons, agricultural implements and utensils and other ritual objects of the early iron age associated with urn burials and rude stone monuments or megaliths help us in understanding the culture of the ancient South Indians.

The *pre-historic antiquities* of this museum are exhibited partly in the ground floor of the front building to the rear of the Museum Theatre and partly in the first floor of the new extension at the entrance of the Museum. The former include the large classical collections made and catalogued by the pioneers of prehistoric studies in India, J. W. Breeks, R. B. Foote and A. Rea. The latter consist of typical exhibits from Mohenjo-Daro and Harappa. The Breeks collection together with the collections of Cardew, Rea and others were catalogued in 1901 by R. B. Foote and these constitute the earliest of the Museum collections in prehistoric antiquities. The Foote collection of prehistoric and proto-historic antiquities was acquired for this Museum in the year 1904 by the Government of Madras at a cost of Rs. 40,000 and catalogued by Foote himself in 1914 and his 'Notes on Ages and Distribution' came out in 1916 as an additional illustrated publication. The finds from the Adichanallur urn burials and the Perumbair megaliths were catalogued by A. Rea in 1915. These with the large collections of Krishnaswami, Manley and Aiyappan representing the stone age culture of Southern India constitute one of the world's largest collections of prehistoric antiquities gathered together in one museum and form the index collection for reference, study and research for prehistorians from all over India and abroad.

Augmenting this huge Indian collection which practically covers the whole of peninsular India are small but highly typical and representative collections of Stone Age antiquities from the world over built up by this Museum on an exchange basis. Among the countries and cultures, thus represented are the Rostrocarinates, Abbevillean, Acheulean and Neolithic of England, the Mousterian and Magdalenean of France, the palaeolithic of South Africa which resembles the Madrasian in many respects, the Neolithic of Egypt, the Tampanian of Malaya, the Patjitanian of Indonesia, the Choukoutenian of China and collections of stone tools and pottery

representative of the pre-history of the United States of America and the neolithic of Japan.

The Old Stone Age.—The earliest known remains proved to be definitely of human industry belong to this age. All the tools used by men at this time were of hard stone, and they were prepared by chipping with other stones so as to give them a sharp edge or a point. Their surface was left rough. The stone age can, to some extent, be dated with reference to the geological remains indicating successive changes in climate or in the animals living at that time. The palaeolithic of South India is said to be roughly 1,25,000 to 5,00,000 years old. During this age man was essentially a hunter and food gatherer wandering in search of game and collecting fruits and digging up edible roots. This was the age of crude and unpolished stone tools, roughly flaked and chipped. In South India such tools have been obtained in numerous localities from beds of laterite where thousands of years must have been required, after the tool-makers had left them, for the thick deposits overlying them to be laid down. The great antiquity thus indicated for some of the tools is supported by others having been found in association with fossil remains of animals which have become extinct long ago in India. Quartzite was the stone most commonly used in South India, as flint which can be more easily and efficiently worked was too rare to be had for this purpose, as it was in Europe, where it is abundant.

Of palaeoliths the most commonly known are the so-called hand-axes, bifaces, bouchers or coup-de-poings. These are made from pebbles of suitable size by removing large flakes from the upper and lower surface, especially at the narrow end. On some of the tools parts of the original pebble surface can be seen. These were not provided with a handle, but were held in the hand when used, hence their name hand-axes or coup-de-poings. Simpler types of tools made from rounded pebbles by removing very few flakes are the pebble tools and these when worked further gave rise to the chopper tools of the Soan industries. These chopper types are seen not only in the Madrasian localities but also throughout South East Asia. Another common type of palaeolith which is characteristic of Madras is the cleaver. It is a flat axe-like tool, with a broad cutting edge, formed by the intersection of two flaked surfaces inclined to one another at a small angle. Cleavers were ordinarily made from flakes rather than from pebbles. They can only be made from quartzite and not from flint, and are characteristic of the quartzite users of Africa and India One special type of these cleavers is the guillotine type characteristic of the Madras facies. The very first palaeolith discovered in India in 1863 by the eminent prehistorian Robert Bruce Foote belongs to this Madrasian type and is a very important exhibit of this Museum in constituting the very first landmark in prehistory in India. Finer hand axes or Ovates came to be made during the

second phase of the palaeolithic when flaking became more refined and extended all round, the pebble from which the tool was made. In addition the edges were further chipped with the result that the tool became more shapely and their cutting edges straighter and more efficient. Scrapers were made from rather large flakes. They have a convex cutting edge running along on one side only, the opposite side being blunt. Scrapers are used for skinning animals. (Fig. 1).

The Middle Stone Age.—Towards the close of the palaeolithic age ancient man began the art of working small flake tools of agate, chalcedony, chert, carnelian, jasper, obsidian and quartz. These tools were attached in series to a handle and were used for cutting. On account of their small size they are called pigmy flakes or microliths. Large numbers of waste cores from which such flakes have been removed show how these small tools were made. These fine tools are found in a wide range of forms called blade, burin, lunate, triangle, etc. Microliths have a wide distribution in India and are dated to about 10,000 B.C. As these small tools come to occupy a position midway between the old and the new stone ages they are said to belong to the middle or mesolithic age though they survive in the later neolithic phases. Thus there is no hiatus between the old stone age and the new stone age. As mesoliths are not found in Burma they are to be derived from the mesolithic of Western Europe.

The New Stone Age.—The neolithic age is represented by tools and weapons made by chipping and subsequently grinding and polishing hard and tough stone suitable for the purpose. The stone axes and adzes are well shaped and polished and their edges sharpened by grinding. After centuries and millenia of experience gained in the preceding age Neolithic man perfected the art of stone tool making. The polished stone axes or celts have a very wide distribution showing that the human population had increased considerably since the palaceolithic age. The celts were hafted or provided with handles of wood or bone and used. Most aboriginal peoples the world over regard these celts as thunderbolts from heaven and worship them as they do not know their use. Among neolithic celts there are various types ranging from thick axes almost circular in cross section to flat chisel like tools which are sharp at both the cutting edge and at the butt end. They were made of hard rocks such as diorite and basalt or more rarely fine grained sandstone. Some of the neolithic axes were merely chipped in a more or less careful manner and then slightly polished along the cutting edge only. But in the making of a fine celt there were many stages. A piece of rock was first selected and roughly chipped into form. Then it was pecked, that is, angularities due to chipping were broken down. Then the implement was ground and all the roughness smoothened away when it was ready for inserting the handle. The typical neolithic celt has a

broad rounded cutting edge and pointed butt with oval cross section. (Fig. 2). The neonthics celt which is the prototype of the early hoe blade of iron is thin and broad and of uniform thickness, the cutting edge being somewhat broader than the butt end. The first metal tools which were made during the Bronze age are said to be copies of this type of stone tool. The corn crushers and hammer stones, the mealing stones and saddle querns are also neolithic stone tools used in milling and grinding corn or grain for food. The neolithic age was a period of such great progress and change in the way of life of primitive man that it was called the neolithic revolution. This change from food collection to food production is of such great moment that even today it forms the very basis of our socio-economic life. It was during this age which probably began over 10,000 years ago that man came to know and use such revolutionary changes as agriculture, the domestication of animals, spinning and weaving, living in permanent settlements and making and using pottery, for all which neolithic sites in India are yielding abundant evidences. Pottery was in the beginning hand-made and was fashioned on the model of the earlier vessels made from natural objects such as gourds, shells and horns. The neolithic phase is in abundance in Central and Southern India. Bellary is the real focus of the Neolithic culture in Southern India and is the richest region in prehistoric remains in the whole of India. The neolithic in India is dated between 6000 to 4000 B.C.

The Bronze Age in Peninsular India.—In all the earlier excavations of prehistoric sites in South India no copper or bronze objects were found either in association with or immediately after the late neolithic. The bronze objects known to us are those found in association with the pottery, beads and iron objects of the early iron age or megalithic burials as for example those from the Urn burials of Adichanallur in Tirunelveli district and those from the cairns of the Nilgiris. This led to the view, now discarded, that the neolithic merged directly into the iron age without the intervention of a copper or bronze age. Recent finds of bronze objects in Maharashtra, Mysore and Hyderabad (1946) in strata antecedent to the Early Iron Age have now definitely established that these metals were being used for making tools when the use of iron was not known. The association of bronze objects with the last stage of the neolithic of Nasik, Brahmagiri and Kallur points to a phase during which stone implements persisted along with bronze tools as in the Indus Valley. Thus a copper or bronze age is now recognised in the prehistory of South India. At these sites copper objects like simple flat celts were found associated with microliths, painted pottery and sometimes polished stone axes. This crude and primitive chalcolithic culture of Western, Central and Southern India does not appear to have any links with the chalcolithic of the Indus Valley. It resembles the latter only in the occurrence of painted pottery, microliths and copper objects.

The people of the chalcolithic phase of peninsular India lived in mud houses with flooring of some fibrous material mixed with lime. They buried their dead in urns fragmentarily. They possibly had defensive ramparts around their settlements.

The Bronze Age of the Indus Valley.—About five thousand *year ago when* Egyptians and Sumerians were building magnificent tombs and temples, but living in mud huts, a highly developed urban civilization flourished in the Indus Valley extensive remains of which have been found at various sites in Pakistan. Of these ancient sites two of the most well known are Harappa in the Punjab and Mohenjo-Daro in Sindh. At that time Sindh and Baluchistan had a heavier rainfall and supported a larger population than they do now, and the original city of Mohenjo-Daro was considerably larger than its present ruins which are about a square mile in extent.

The people of the Indus civilisation lived in large cities with broad paved streets. Mohenjo-Daro reveals a definite scheme of town planning. Some of the streets are thirty feet wide and are aligned from east to west and north to south. There are large underground drains through which a man can walk erect. The commodious houses are built of dried bricks and mud plaster. They are two or three storeyed and have large courtyards. There are large baths. The people stored wheat in large pottery jars which they buried in the floor of their houses. The large bricks used for building, the pottery jars and even the wheat grains stored in them are among the exhibits.

The chalcolithic culture of the Indus Valley is a highly developed urban culture with very wide ramifications. Its expansion is vouched for by the large number of Indus sites now excavated in India, viz., Rangpur, Bikaner, Rupar and Lothal.

The Indus culture was of the copper or the bronze Age. No traces of iron have been found. Copper and bronze tools existed side by side with stone tools. Characteristic exhibits of this civilisation indicate the high cultural level of the people. They knew spinning and weaving, sculpture, bead making, working in gold, silver, copper, shell, bone, ivory and semi-precious stones like carnelian. Household articles are of earthenware, shells and stone. Pottery is wheel made, well baked and include both plain and decorated wares. The weights and measures are accurate and made of polished stone cubes. The smaller weights follow the decimal system and the large weights the binary system. The Indus Valley people had a hieroglyphic, ideographic or pictographic writing which they engraved on square stone seals. The Indus writing is said to be the parent of the Brahmi script from which most of the scripts of the present day Indian languages have had their orgin. The mother goddess is prominent among the human forms of terra cottas while the animals forms include the humped

bull, the rhinoceros and the unicorn. The predominance of ritual objects had led to the view that Harappa and Mohenjo-Daro were ancient ceremonial and pilgrimage centres like Mecca or Benaras.

The Iron Age in India.—The iron age in India is believed to be of very great antiquity. Evidence of steel casting by the crucible process is available in the Tiruchirappalli district and it is perhaps noteworthy that many of our most primitive people know the art of smelting iron. During this period wheel made pottery had attained a very high degree of excellence and perfection. Most of our knowledge of the beliefs and practices in connection with the death rites of the ancestors of modern South Indians is derived from a study of iron age funerary monuments which abound all over the country. Among these are the large urn burials so characteristic of Tirunelveli and Coimbatore districts, the large pottery cists or sarcophagi of South Arcot and Chingleput districts, the dolmens of North Arcot district, the underground stone chambers of Mysore and the several types of burials such as rock cut tombs, hat stones and umbrella stones of Kerala. Along with the remains of the dead, various grave goods such as cult figurines, vases of pottery or metal, weapons, beads and ornaments of semiprecious stones, metal and shell were placed in the burials. The ancient beliefs underlying these practices survive in many current death customs, principally among the aboriginal peoples and the Iron Age must not be thought of as exclusively pre-historic, for it is also the age of the present time.

Urn Burials of Tirunelveli.—About twelve miles to the South east of Tirunelveli town on the southern banks of the river Tambarparani lies the world's largest burial ground covering over 114 acres. The urns buried in this region are large and pyriform in shape. Thousands of such urns were found buried each six feet apart and at the depth of three or twelve feet. Their contents are varied in form and constitute remarkable exhibits.

Among the ornaments were oval shaped diadems of thin gold plate ornamented with triangular and linear dotted designs. These types of ornaments called 'Pattams' were probably tied around the forehead of the dead. They are even to this day used in South Indian marriage ceremonial where they are tied round the foreheads of the bride and bridegroom as an indication of the married couple being vested with their new rank and status by the elders who tie them. Other ornaments such as bangles, bracelets and rings are made of bronze, shell and bone. The bronze animal figurines include buffaloes, goats, cocks, tigers, antelopes, elephants and flying birds. Very thin bronze seive cups with perforations in the form of dots arranged in a variety of designs of concentric circles and semi-circles were also found. These fit into thicker bronze basins as lids. A number of bronze terminals consisting of several branches each ending in a spherical or conical bud and interspersed

with the form of small birds or animals are probably ritual objects. The iron objects associated with the burials consisted of weapons and agricultural implements. These were placed around the urns pointing downwards as if they had been thrust in by the attendant mourners. The pottery consisted of the typical red and black ware so very characteristic of megalithic monuments in South India. Most of them were provided with ringstands while the pottery bowl with a conical lid often decorated with fine dots was the main type.

The human skeletons found in these burials enable us to understand the racial types of the population of South India over two thousand years ago. Of the several skulls discovered here two are Australoid, six Mediterranean and one Alpine in type, thus revealing the presence of most of the modern racial elements of the population at this period.

Sarcophagus burials of Chingleput.—There are a large number of rude stone monuments in the Chingleput district which have been excavated in recent years. These sites occur in the waste or rocky places which surround the hill ranges. Around the base of the hills the remains are placed a short distance from the bottom slopes, and usually consist of stone circles varying from eight to fifty feet in diameter, formed of rough stone boulders. In the centre of each stone circle is deposited either a pyriform urn or an elongated pottery cist. The deposits occur at a depth of two to seven feet below the surface. The cists or sarcophagi, several of which are exhibited in the prehistoric antiquities galleries of the museum are oblong in shape and rounded at the ends like bath tubs. They have hollow cylindrical legs in two or three rows. They are covered over with dome-shaped lids. Similar sarcophagi found at Pallavaram near Madras had only two rows of legs. In addition to excarnated human bones the cists contained stone and iron implements, weapons, pottery, beads and chank shell ornaments. Exhibited in the same gallery are fairly large oval earthenware shallow saucers from Malabar one of which is without legs and the other with very short legs. These appear to be ceremonial utensils in which funerary offerings were made. They represent stages in the evolution of the large type of earthware cist or legged sarcophagus of the Pallavaram type.

The Ram Sarcophagus from Cuddapah.—At the entrance to the Adichanallur gallery is a very large earthenware sarcophagus dug up at Sankavaram in Cuddapah district. This unique zoomorphic or animal-like sacophagus depicts the head and body of a ram though it has six legs. This was obtained from an excavation conducted by this Museum and had a number of megalithic pottery specimens and a few iron implements disposed around it besides the usual collection of excarnated human bones.

Though this sarcophagus is unique it appears to be modelled essentially after the usual Pallavaram bath tub type of sarcophagus. The legs are in two rows, are higher and the dome is built in sections with a separate attachment for the head.

Cairns of the Nilgiris.—On many of the sacred hills of the Todas are stone circles. Each encloses a crude sort of grave surrounded by a cairn of the draw well type. These cairns were excavated by J. W. Breeks and his remarkable collections were catalogued by R. B. Foote (Fig. 3) for this museum. The pottery vessels consist of tall exotic looking tiered vases surmounted by domical lids. To the lids of these were attached crude and grotesque human and animal figures. The buffalo is the predominant animal type and many of the human figures are equestrian. Another type of pottery is the round-bottomed jar with incised or punch-marked designs. The iron objects include arrow heads, pikes, lancepoints, billhooks, spearheads, chisels, daggers, bells, a lamp, a rattle, a shearer and a spade. The copper objects include bangles, rings, collyrium rods, a sword guard, the carved pommel of a dagger and a vial. The bronze bowls are very elegant and artistically made. One of them is an exquisite oval bowl decorated with lotus patterns, flutings, buds and fronds. This fine bowl stands on a pedestal. It resembles a gold bowl from Ur, circa 3500 B.C. Other bronze objects are a censer with a central rod and decorated rings. A curved hone, a mace head and some pumice stones are the stone objects among the specimens. The beads are of agate, carnelian and gold. The carnelian beads are etched, the agate beads cylindrical and the gold beads round.

Megalithic Cist of Brahmagiri.—A model made in this museum illustrates a megalith excavated at Brahmagiri in Mysore. This is the typical stone cist burial known as a porthole cist constructed in this manner. A pit was dug and lined with four roughly trimmed rectangular slabs 5 feet by 6 feet in a Swastika pattern locking the four sides to prevent falling in. There was a floor slab on which the four upright slabs rested. The top of these was covered by a massive capstone. The upright slab on the eastern side has a circular porthole about two feet in diameter. The funeral pottery, iron objects and beads were introduced through the porthole and lay on the floor slab. This was filled up to 6 inches with earth over which the excarnated long bones and skulls were introduced so as to be in the centre. Along with the bones a few pots were put in. The earth was put in through the porthole which was then closed and the entrance walled up. The stone cist was then surrounded by one or two circular or oval dry stone walls. The top of the cist rose 3 feet above the ground level and was heaped up with earth and small stones. Large stone boulders about 4 feet in diameter were put in to form the stone circle which is about 20 feet in diameter. The stone boulders lie more than half buried in the ground.

The rock cut caves of Feroke, Panuda, and Punnol Malabar.—A stepped rectangular pit is dug out into the lateritic rock. In the straight face is cut a rectangular entrance above floor level of the quadrangle. Through this, the cave is hollowed out. The floor of the cave is circular and its roof dome shaped. The cave is a hemispherical chamber in which pottery, especially the four footed urns, beads, iron implements and human relics are deposited. Some pottery from Chelleth cave at *Punnol* had geometrical designs and bands in black on them. 'Raised' platforms are cut out of the rock on the sides of the cave. There is an upper opening plugged with a piece of granite and a side opening from which a flight of steps leads to the surface. The entire tomb is surrounded on the surface by a stone circle.

The iron age burials of India have certain common features which are characteristic of the megalithic culture. The use of iron implements and wheel made pottery of a peculiar red and black ware are characteristic of the megalithic age. The burials with which the megalithic monuments are associated are secondary, fragmentary and collective burials. Stone circles or dolmenoid cists are associated with these monuments though they are not seen in the case of the urn burials of Adichanallur.

The Brahmagiri cultures.—The succession of three cultures found at Brahmagiri are (1) a crude chalcolithic culture, (2) a megalithic culture and (3) the Andhra culture.

The chalcolithic culture extends from the beginning of the first millenium B.C. to the middle of it. Polished stone axes, blades, points and coarse hand made pottery are characteristic of this culture. A few copper and bronze objects were found in a lower layer of this culture. The stone axes are made of trap rock, polished and have pointed butts and oval cross section. Microliths of jasper, flint and agate were also found with the stone axes. The pottery is of a coarse grey fabric and consist of globular vessels. Painted and incised potsherds were found in the lower layers. Rectangular houses built of timber and burials were also associated with this culture.

The second megalithic culture from 800 B.C. to the middle of the first century A.D. introduced iron working. This is indicated by the occurrence of large numbers of iron sickles, knives, swords, spears, arrowheads and wedges. Polished stone axes and microliths continued to occur occasionally as survivals of the earlier culture. The pottery distinctive of this period is polished, black or black and red and had been turned on a slow wheel. Houses continued to be built of timber. The megaliths of this period are of two kinds (1) the cist burial and (2) the pit circle. As an example of the former the porthole cist of Brahmagiri, a model of which is exhibited, has been described earlier.

The third Andhra culture extends from the middle of the 1st century A.D. to the 3rd century A.D. and is characterised by the occurrence of pottery with a criss-cross pattern of decoration. The pottery of this period is turned on a fast wheel and is sometimes salt-glazed. In the lowest layers of the Andhra culture occur pottery of the rouletted ware. Glass bangles appear for the first time at this period.

The Romans in South India.—A good number of Roman and Venetian coins from treasure trove finds in South India testify to the extensive trade relations which ancient India had with Rome and Venice. Excavations at a site near Pondicherry called Arikamedu have shown that these contacts were at their zenith in the first centuries B.C.—A.D. when Rome and other western nations imported textiles, indigo, spices, shell ornaments and beads of glass and precious stones from South India and not only paid for them in gold but also exported to India Mediterranean wine in large two handled pottery jars called amphorae (Fig. 6). The Romans like the Portuguese, Dutch, French and English empire builders who came later, established their settlements and factories in the coastal towns of India and had wide commercial relations with India. Arikamedu is also noted for being the site where the earliest writing in the Tamil language was discovered on potsherds. Again the archaeological map of South India began to take shape with the dating of the indigenous pottery of Arikamedu with which imported Italian pottery (Fig. 5) of known date occurred. The establishment of the date of Arikamedu and its similarity to the cultures of Brahmagiri and other sites enabled the dating of these sites.

The cultural history of India from the Buddhist period beginning with the middle of the first millennium B.C. to the middle of the second millennium A.D. is represented in this museum by coins, sculptures in bronze and stone and copper plate charters. Descriptions of these world famous antiquities are given in the archaeological and numismatic guides of this Museum.

Arms of the Historic period.—The front building of the museum houses the Museum Theatre in front and the Connemara Public Library behind. The prehistoric antiquities of the stone and iron ages are housed on the ground floor in the right wing of this building while on the left wing are housed the arms of the historic period. At the entrance to these wings is a very long row of spears from the Thanjavur armoury arranged against the wall. There are also two huge bronze bells from China, brought as trophies of the notorious opium war. At the entrance to the arms galleries are on view a varied assortment of halberds, pikes, spears and a set of Spanish plate armour from Manilla. The arms collections of this Museum are arranged in two rooms while a number of huge cannon are displayed around the front building. These cannon were obtained as trophies from Manilla, Mysore and Tarangambadi.

In the first arms room are ancient matchlocks, musketoons, hand guns, blunderbusses, rifles and pistols used by the English East India Company or captured by them as war trophies. Two guns richly inlaid with gold which are exhibited in special cases are those which were presented by the English East India Company to Serfoji Maharaja of Thanjavur. A set of artistically engraved powder flasks is an attractive exhibit. A series of battle axes, arrows, and chain shot are fixed to the wall. Some Chinese helmets and a few stone shot are exhibited in special cases. On the floor of this room can be seen a number of cannon, mortars, wall pieces, grape-shot and some coats of mail armour. Of these a large breech loading cannon is a unique exhibit. Some of the miniature models of mortars and cannon are also of interest.

In the second arms room a very large and varied collection of ceremonial and lethal weapons obtained from the Thanjavur armoury are exhibited. They include swords, daggers, maces, elephant goads, choppers, knives, shields, spears, bows and arrows. Several of these weapons have exquisitely carved designs of yalis, makaras and parrots on them. Among the cannon exhibited here are two very old ones which represent the earliest method of cannon manufacture. Longitudinal strips of iron are arranged inside a series of circular iron loops and the whole is welded together. Other interesting weapons in this series are the reversible steel bows and the signed arrows of the Maharaja of Thanjavur and the Bag Nak or the tiger claws, a type of weapon which could be concealed in the palm and which was used by Shivaji against Afzal Khan.

Ethnographical collections of South India.—Illustrating the way of life and the material culture of the primitive peoples of South India are the ethnographic collections first acquired for this museum by Dr. Edgar Thurston (Fig. 4) when he conducted the State Ethnographic Survey from 1894 and published his outstanding pioneer work " The Castes and Tribes of Southern India " in 1909. These have been augmented considerably by subsequent ethnographers and are exhibited mainly in the first floor galleries of the front building which also houses the large collections of South Indian bronzes, metalware, wood and ivory carvings. The ethnographic collections are now highly representative of the material culture of most of the South Indian tribes such as Todas, Kotas, Mannans, Muthuvans, Kanikar, Chenchus, Lambadis, Saoras, Khonds, Koyas, Gadabas, Kurumbas, Irulas and Malasars. These include wearing apparel, ornaments, implements of collecting, hunting and agriculture, devices for making fire, musical instruments and cult objects Other collections include writing materials, musical instruments, votive offerings, figures used in sorcery, shadow play and the Kathakali dance-drama.

South Indian tribes.—The primitive peoples of Southern India illustrate different levels of cultural and social organization such as the simple food gatherers and hunters, the pastoral peoples with

their flocks and herds, the tribes given to shifting cultivation variously styled as podu, kumari and punam and those tribes who have taken to settled agriculture.

The *Kadar* of the Anamalai hills in Coimbatore (Fig. 7) are the oldest inhabitants of India. They exhibit a negritoid or pygmy racial strain. Their population is about 700. They are fast dwindling in numbers. They speak a corrupt form of Tamil mixed with a few Malayalam words. Their social life is based on a simple food gathering economy. They know no agriculture and have no domestic animals except the dog. They dig up edible roots, collect honey and minor forest produce, track elephants and are experts in tree climbing. The Kadar have many interesting customs. Among the exhibits are some of the exquisitely carved bamboo combs one of which every Kadar man has to make and present to his wife on his marriage and which the woman wears in her back hair. Similar bamboo combs are used by the negritos of New Guinea and some of these form an interesting exhibit. The practice of tooth chipping by which both men and women, when they come of age, have their front teeth filed or chipped into pointed cones to enhance their beauty is another custom which is also practised by the Malavedans (Fig. 8). Yet another custom is their observance of mother-in-law avoidance.

The *Hillmen of Kerala* include such tribes as the *Kanikar, Mannan, Muduvan, Mala Arayan, Ulladan* and the *Pulaya*. They are mostly hunters and shifting cultivators. They build huts of bamboo and leaves and most of their household utensils are of bamboo. They use pellet bows and some of them have blunt arrows which are used for stunning birds and small animals. These do not have iron points. They have digging sticks of wood and use the bow type of rat traps. Besides coloured glass beads and base metals these tribes use coconut shell and rattan fibres for making ornaments. Like the Kadar they build rectangular houses which are sometimes erected on tree tops. The Thanda Pulaya have a peculiar custom. When a girl comes of age she is invested with an apron made of a sedge or reed called Thanda (Fig. 9). The Ulladans are the only tribe who use the cross bow with the trigger release (Fig. 10). This type of bow naturally leads to the harpoon and the harpoon arrows or darts which are made in such a way that the entire arrow with hooks or barbs in the harpoon or the front end of the arrow is detachable and after striking the quarry remains fixed to it. Another weapon used by some of the Kerala tribes for hunting small animals or spearing fish is the blow tube or blow gun. This is used with darts propelled by blowing air with the mouth. Blow guns are also used by the Senoi Sakai of Malaya and the Kenya Kedda tribes of Bornea with poisoned darts.

Among the people of the Nilgiri hills the *Todas* are the most unique tribe living with the Badagas, Kotas, Kurumbas and Irulas. The Todas are a decadent pastoral tribe tending buffaloes and

living on their dairy produce. They live in half barrel-shaped dwellings (Fig. 12). They are the only Indian tribe known the world over on account of some of their past customs like female infanticide and fraternal polyandry. The Toda men are tall and handsome with aquiline noses and clear cut features while their women are plain with infantile features. The men are good at carving wood especially making walking sticks. The women embroider their garments. These are called " Putkuli ". A model of the half barrel-shaped dwelling of this tribe together with the heavy brass ornaments, the ceremonial clubs and imitation buffalo horns which are burnt at funerals, and purses and boxes decorated with cowry shells are exhibited. Of the several husbands of a Toda women, the one who presents her with a ceremonial bow and arrow during her pregnancy rite is considered to be the father of her child.

The *Kotas* are the artisan tribe of the Nilgiris. Their population is about 2,000. They work in gold and silver, are carpenters and blacksmiths, tanners and rope makers, umbrella makers, potters and musicians and are at the same time cultivators of the soil. They are considered to be untouchables by the Todas as they are beef eaters. The Todas are vegetarians and the buffaloes they sacrifice at their funerals are given away to the Kotas. The Kota collection in the museum include a small turn-table type of potter's wheel called tournette (Fig. 13) with its accessories, iron implements like axes, adzes and spears and ornaments like bangles and bracelets. The Kotas resemble the Todas in physical type, as well as in some of their social practices like fraternal polyandry.

The *Kurumbas* of the Nilgiris and Malabar are shifting cultivators, the *Kurubas* of Mysore and Bellary are shepherds, the *Kurumans* of Wynad are hunters and nomad agriculturists, while the *Urali Kurumbas* work in metal or make pottery. The *Kadu Kurumbas*, the *Jen Kurumbas*, the *Vettu Kurumbas* are others who are more primitive in that they collect honey and forest produce and hunt for their living. They speak Tamil, Canarese or Malayalam according to the region they inhabit. The *Urali Kurumbas* of Wynad are interesting in that they represent the only tribe in South India who make handmade pottery by the scooping method.

The *Irulas* are a dark skinned platyrrhine tribe inhabiting Malabar and the Nilgiris districts. They work on plantations or collect forest produce (Fig. 14). In South Arcot, North Arcot and Chingleput they are more civilized though they constitute the most backward groups and are given to menial occupations. The Irulas of Malabar make fire by wood friction or flint and steel, catch rats in bow traps and are especially fond of the flesh of the black monkey. The Irulas resemble the Yenadis and Chenchus of Andhra in that they are emerging out of their tribal life in the jungles and forests and are taking their place among the civil population.

The *Malasars* and *Malai Malasars* of Coimbatore are another typically Australoid people living on the Anamalais like the Kadar whose dominion extends into Cochin. The Malasars are employed on plantations. They are good trackers and trainers of wild elephants like the Kadar. They are a very backward tribe and occupy a very low position in society, as they eat carrion. Their population is about 10,000. They resemble the Kadar in their physical type being short in stature and dark in colour. A collection of the simple ornaments made of brass and other base metals of this tribe is exhibited.

The *Chenchus* are a primitive Telugu speaking tribe of the Nallamalai hills of Andhra Pradesh (Fig. 15). They have a food gathering economy and are expert hunters. They are now slowly taking up agriculture. They build circular huts with conical roofs of the beehive pattern. They use flint and steel for making fire. The Chenchus are Australoid in physical type having dark skin colour, prominent eyebrow ridges, long heads and medium stature. They are allied to the Yanadis and Irulas.

The *Lambadis* are a large picturesque tribe who are found throughout Deccan though most of them are found in Andhra Pradesh, especially in Telangana (Figs. 16 & 17). They are also called Banjaras and Sugalis. They are tall, fair complexioned, have aquiline noses and classical Nordic features. They are good agriculturists and excellent cattle breeders. They served as the commisariat of the Moghul armies. Lambadi women wear heavy cumbersome ornaments, and beautifully coloured garments decorated with pieces of stone, cowries and bits of mirror glass, the last of which is becoming the rage of fashionable women all over the country. A model of a Lambadi woman with her picturesque dress and ornaments is one of the most attractive exhibits of the museum.

The *Gadabas* are an agricultural tribe of Ganjam and Vizagapatam district. They were formerly employed as palanquin bearers and plantation labourers. Their population is about 30,000. They speak a mundari language and have dark skin colour and mongoloid features. The women have infantile features and wear picturesque dress and ornaments. The Gadaba women's dress consists of a narrow fringed loin cloth and a similar upper cloth both woven out of bark fibre yarn dyed in bands of red, blue and white (Fig. 18). Their ornaments consist of large coils of brass wire for earrings, numerous strings of coloured glass beads, bangles, bracelets, anklets, finger and toe rings, besides necklaces of shell cowries, metal and glass beads and bead head bands. The women prepare and spin yarn from the bark fibres of a number of wild plants (*Ficus glomerata, Calatopis gigantea and Hollarhena antidysentericca*), dye the yarn red with the seeds of the Jabra (*Bisca orellana*) and blue with indigo, and weave it on primitive handlooms. A Gadaba girl is considered fit for marriage only when she knows to spin yarn

and weave cloth from bark fibre. The Gadaba woman wears a bustle or figure improver of black cords at the small of her back in addition to her gay and simple garments and lavish ornaments (Fig. 19).

Gadaba life is centred around their villages to which the people are very much attached. They live in beehive type of huts. They practice both hill cultivation with hoes and terraced cultivation with ploughs besides hunting and fishing.

The Gadabas have a patrilineal social organization. They practice clan exogamy and have totemistic phratries. They have dormitories for the unmarried young of both sexes. They have a dermocratic form of Government in which the headman sits in council or panchayat on stone seats (sodor) and dispenses justice. They have a huntig feast in March-April and worship Hindu Gods and Goddesses to some of whom they offer buffalo sacrifices. Their male dead are cremated while women and children are buried. They erect stone monuments over the graves of the dead. A plaster cast model of a Gadaba woman with her dress and ornaments is exhibited together with some of the ethnographic materials illustrative of Gadaba culture.

The *Khonds* of Ganjam, Orissa, are hunters and shifting cultivators. They are a very large tribe speaking a Dravidian language. They used to sacrifice human beings in honour of their Earth Goddess or *Tara Pennu*. A large wooden post found at Baliguda in Ganjam district is the only exhibit in this museum reminiscent of this practice (Fig. 21). The sacrificial victim was dedicated, purchased or captured. He was anointed with oil and turmeric and tied to the cross piece of the post which represented an elephant. This used to be whirled round and round the upright post. Men and women danced and sang around the victim who was drugged and intoxicated. He was then battered to death and hacked to pieces. Every Khond took a piece of the victim's flesh and buried it in his field to ensure good crops and avert evil. When the practice was prohibited in 1845 the Khonds took to sacrificing goats and buffaloes.

The *Khonds* have ceremonial objects of a wide range among which the cobra, the tortoise and the tiger represent some of their totems. These fine series of brass images of animal and human figures are worshipped and carried in front of marriage processions. The Khonds practice different forms of marriage such as marriage by service with the bride's parents, by mutual consent, by elopement, by ceremonial capture of the bride or by selection from the Dangadi Basa or virgin's hall. Like most aboriginal peoples divorce and the remarriage of widows are permitted and the junior levirate by means of which a widow marries her deceased husband's younger brother is practised. The dead are cremated and funeral feasts are held. The bison hunt dance, a characteristic feature of this tribe, is represented by men wearing the head dress of bison horns and peacock feathers (Fig. 20). The men use bows and

arrows and battle axes in their hunting. Dress and jewelly are represented by leaf aprons and bark fibre clothing and heavy brass bracelets anklets, rings and combs.

The *Saoras* are a Mundari speaking tribe inhabiting the Ganjam and Vizagapatam districts. Their population is over 2,00,000. They are medium statured and dark skinned with marked Mongoloid features. They have flat faces, thick lips, broad and flat noses, high cheek bones and markedly oblique eyes. The women have a typically heart shaped face while the men show superb muscular development (Fig. 22).

The Saoras are a timid tribe and avoid contacts with strangers. They live in rectangular houses built in parallel rows which present an orderly appearance in the jungle. Saoras practice both hill cultivation and terraced wet farming, collect forest produce and even used to migrate to the tea plantations of Assam as labourers. The men hunt with bows and arrows and use a battle-axe called the Tangi. Being an artistic people with a wealth of ornaments and musical instruments they are given to song, dance and drink on festive occasions. Marriage is preceded by a ceremonial capture of the bride. The Saoras have a shamanistic religion and sacrifice pigs and fowls on all important occasions. The dead are cremated and stone monuments erected in their honour. Buffaloes are sacrificed at funerals and feasts held.

The Saora ethnographic materials include a collection of musical instruments of which there is a wide range, a number of ornaments including anklets, armlets, head bands, ear pendants, plumes for head dress, nose rings and finger rings, a number of bows, arrows and the tangi or their characteristic battle-axe, knives, seed drills, baskets and calabashes, smoking pipes which are usually carried stuck in the head hair by men and women (Fig. 23) and a number of cult figures of wood representing parrot, monkey, man, etc. A hut model represents the rectangular type of dwelling of this tribe.

The *Koyas*, the southernmost branch of the great Gond tribes, number over 95,000 and inhabit the Godavari, Visakhapatnam and Srikakulam districts of Andhra (Fig. 24). Their language varies from Kui in the north to dialects of Telugu in the south. Though hill cultivators the Koyas plough the land they cultivate. They have occupational groups among them. They celebrate every harvest by a festival. They are good at hunting. Feasting and drinking are common at festivals and their bison dance is famous. The Koyas have a democratic form of panchayatraj in which the headman in council settles disputes. Koya social organisation is characterised by clan exogamy and kin marriage. Marriage rites include the ceremonial capture of the bride and the pouring of water on the heads of the couple from a gourd bottle. The Koyas cremate their dead, erect monuments over their graves

and worship ancestral and Hindu Gods. Koya ethnographic materials include bows and arrows, bison horn head dress with peacock feathers, a drum used in the bison dance, a bird trap and a gourd water bottle.

Australian Tribal culture.—The Australian aborigines live the life of nomad hunters in a hostile desert environment. They are said to have migrated from Asia about ten to twenty thousand years ago. Ever since their discovery by the European colonists they have always refused to accept civilisation and have gone deeper and deeper into the desert where they eke out a very precarious livelihood. Their population at present is about 50,000. They are constantly on the move in search of food. They hunt and kill animals with wooden spears and boomerangs and besides these live on grubs, collect grass seed which they grind and bake into bread. They have no regular dwellings except wind breaks and rock shelters. Men, women and children practically wear no clothing in spite of the cold. They use kangaroo hides to protect their children (Fig. 26).

In physical type the Australians resemble the aboriginals of Southern India who are therefore to be Australoid. Tall and well built, they have prominent eyebrow ridges, broad flat noses, thick lips, dark skin colour, curly hair and hairy bodies.

Their material possessions are boomerangs, spears, digging sticks, food bowls and a few skins or hides. They make and use blades and knives of stone, porcelain or glass pieces. *Tjurungas* are the most sacred and secret possessions of the aborigines in which lie the mystery of their initiation rites. The *tjurungas* are of wood and stone. They are oval objects on which are engraved a number of circular designs which represent the history of the tribe. The spirit of the tribe resides in the stone *tjurungas* which are kept in secret places known only to the elders. *Tjurungas* made of wood are commonly known as *bull roarers*. The bull roarer is a flat oval piece of wood tapering at both ends. It swings from a string of vegetable fibre or human hair. It rotates on its own long axis and at the same time whirls round producing a booming noise. This noise is the voice of the spirits. The bull roarer is used in the intimation of boys. Women and uninitiated boys have to keep away from these ceremonies on pain of death. The elders who perform these ceremonies subject the initiates to very painful rites. The strong men of the tribe pour their blood over the boys to give them strength to bear hardships The boys undergo a drastic change from boyhood to manhood. In a tense atmosphere heightened by the booming of bull roarers they learn of the creation of the world. the origin of their tribe, the religion and the way of life of their people. Painful inflictions such as knocking off of teeth, circumcision and subincision with stone blades teach them not to forget the lore of the tribe which they had gained under such a tense atmosphere.

Boomerangs are of two kinds. The longer ones used in war are of the non-returning kind. The smaller ones which return when thrown are used in hunting. Boomerangs of the returning type are also found among many South Indian peoples like the Maravar who excelled in their use. One type of Australian boomerang used in war is peculiar. It has a recurved hook which sticks on to the victim when thrown.

Spear throwers are mechanical contrivances which enable the aborigine to increase the reach of his arm. The spear thrower has a peg which fits into a socket at the end of the shaft of the spear. Both spear and spear thrower are held in the hand and the spear is hurled by releasing it after aiming and swinging the arm to the front. This device is based upon the great ingenuity of the aborigine. When similar devices were first discovered in archæological excavations archæologists were unable to identify them till they were found in actual use by the Australian aborigines. This is one of the earliest instances of the past living on into the present in the lives of the primitive peoples of the world. Here the interpretation of the archæological problem is based on ethnographic survivals. And it is said on the basis of this and similar findings that the Ethnologist is one who catches his Archæology alive. Another illustration from the Australian aborigines of the past living on into the present is seen in their use of stone tools which they continue to make and use as our palæolithic, mesolithic, and neolithic forbears did thousands of years ago. These stone tools which form a unique exhibit include not only tools made of quartzite, chert and flint but also those made of porcelain and bottle glass which are new materials used for making tools in the ancient tradition.

American Tribal culture.—The Eskimos are a mongoloid people with short stature, stocky build, swarthy skin colour, straight black hair and somewhat slanting eyes. They number about 33,000 and inhabit the Arctic wastes of Greenland and North America and the Asiatic coasts of the Behring sea. Living under the most unfavourable conditions they have developed a high degree of skill and ingenuity in making use of their limited resources such as the animals they hunt and the drift wood they collect for all their material needs.

Among the Eskimo material exhibited are the following: A bird bola made of six walrus ivory balls, cord and feather shafts for trapping birds; an Eskimo woman's knife made of steel with a handle of bone and ivory for general use, a seal dart made of iron set in bone shaft, a spear thrower made of wood and bone; snow goggles made of wood with a long slit for the eyes to prevent snow blindness; a scraper of stone set in a carved wooden handle for a left handed person; a needle case made of bone tube inside which the stout copper needle is stuck on to a piece of hide and which is held on either side by bone balls,

Most of the American Indian materials exhibited belong to the North American Indians. Among them is a wooden mask used by the Haida Indians of the north-west coast, who are well known for their potlatches or ceremonial distribution or destruction of property which they amass by industry and thrifty living. Two pairs of moccasins or snow shoes made of soft leather with very fine beadwork on them, a beaded leather bag, leather cradle board cover with fine beadwork all belonging to the Sioux Indians, a beaded pouch of the Cheyenne Indians, a dish of cedar wood with painted crests representing the beaver and the raven of the Kwakiutl Indians, a wooden mask with black fur and tin eyes of the Iroquois Indians who were well known for their great confedarecy of the five nations and the legend of Hiawatha immortalised by Longfellow. A fish hook of the Kwakiutl Indians of the north west coast of America for catching halibut is a very interesting exhibit in having a human face carved on it. A horn spoon of the Tlingit Indians of the coast of Alaska is also exhibited.

The American Indians are noted for their totemism and clan exogamy. Descent is reckoned in the female line and land belonged to the tribe as a whole while families who cultivated plots had a prescriptive right to their ownership Marriage was by bride purchase while the young of both sexes had to undergo painful initiation rites on coming of age. Their religion was one of propitiation of natural spirits by their shamans or medicine men. The ceremonial burial of their dead with grave goods to accompany them to the spirit world was the result of their belief in a future life.

The American Indians in the United States number about 4,00,000. They live mostly in reservations. They were given to hunting. fishing and slash and burn agriculture. Inter tribal feuds and wars, scalping and other forms of carrying war trophies are things of the past. Their housing system shows high technical skill and variety. The *tipi* is a conical tent on three poles covered with bark skins or mats, the *wigwam* is a dome-shaped bark or mat-covered house and the log house of the Iroquois Indians is the most advanced type, 50 feet to 100 feet in length accommodating about ten families. These long houses were decorated with totems like beaver and raven carved in wood. Their artistic tendencies find expression in fine designs on pots, baskets, bags, cloth and jewellery. The moccasins and leather bags, pouches and cradle board covers exhibited are fine examples of their art.

The American Indians are Mongoloid in racial type with copper brown skins. dark eyes, prominent and high cheek bones, but very often with acquiline noses (Fig. 27). Their hair is coarse and black hat they keep their broad faces smooth. There is, however, considerable variation from tribe to tribe. Though the Negroid, Mongoloid and the Caucasoid groups have remained in an apparent

state of isolation in America as the Negro, American Indian and the white population they have been subject to slow miscegenation and evolution into the new American nation with a characteristic American culture.

African tribal culture.—Most African tribes have more than one type of economy. The Congo pygmies are hunters and food gatherers but secure agricultural produce from the Negroes by barter or silent trade. Pastoral and agricultural peoples supplement their diet by hunting, food gathering and fishing. The Bantu tribes of South Africa have a mixed economy in which cattle rearing and agriculture are important. Cattle are of primary social and ceremonial significance. The social status of a person is based upon his cattle wealth. Unlike the pastoral people of India whose mainstay is agriculture the tribes referred to here have mostly a typical cattle culture. Cattle constitute the currency for most of their transactions. Tribute to chiefs is paid in the form of cattle. Fines are levied and paid in the settlement of disputes in the form of cattle. Bride price is paid in the form of cattle. A man without cattle is a poor man. He has no voice in public affairs. He lives for nothing. He grows old in vain. The East African tribes represented here live in the semi-desert areas of Uganda. They include the *Amba, Acholi, Bantu, Dama, Gunda, Hima and the Karamoja*. Among these tribes cattle herding is the main occupation and is supplemented by agriculture, hunting and food gathering.

The men own the cattle and guarding the cattle is their way of life. Each man has on an average a hundred or two heads of cattle, though the exact numbers may vary from four to five thousands among the Karamoja tribe. There is a clear sex division of labour. The men own the cattle while the women practice agriculture. The women live in permanent settlements near the terraces along side of the river banks and do all the agricultural tasks. They have recourse to a primitive form of hoe cultivation. They till, sow and harvest and thrash the grain, cheifly sorghum. They also raise vegetable crops. The women own their produce. They cut wood and gather grass and build and thatch their houses and compounds. They grind corn, fetch water in clay pots and cook their meal of sorghum porridge with fruits and vegetables. They ferment corn meal for beer. During the dry seasons they visit the men in their cattle camps which are scattered far and wide. Men and women wear *bark cloth* which is made by the men by peeling the inner barks of trees and beating them with wooden mallets. The women wear besides the usual ornaments like arm rings, anklets, nose and toe rings, the lip plug or labret.

The men and boys rarely live in the permanent settlements with the women and younger children but keep on moving with their cattle camps. Life in the camp is austere. The men and

boys live mainly on the milk and blood of the cattle. The cows are milked daily but the oxen are bled by turns. Wooden vessels are used in the camp. Boys collect and fetch water in the camp. Cow urine is collected in wooden tubs and used for cleaning utensils, curdling milk, cleaning milk gourds and even for washing the hands. Milk pots of wood resembling gourds are made and suspended by fibre nets. Every boy is presented with a calf by his father. The calf and boy grow together and the boy is known as the father of the calf. They share their food and live together. They wax and wane with the lush and the lean seasons. The boy makes a sisal collar and a bell of tortoise shell or palm seed for the calf. The cattle are corralled. Men are always alert in fear of raids by neighbouring tribes. The men stack their shields and spears on adjacent trees and sleep in the open. Wheel traps, bows and arrows, slings, spears and shields are used in hunting and in cattle raids. One of the most important articles of African tribal culture is the ceremonial stool. A man always carries his weapons and his stool. Many African tribes have their sacred stools. The soul of the man or the tribe resides in the stool. The Golden Stool of Ashanti is famous in West African history. The Ashanti are a war-like tribe of Ghana in West Africa. When the British rulers seized their Golden school the Ashanti fought for it and laid down their lives in thousands. The British ruler thought that the stool was a symbol of sovereignty like a throne and wanted to sit on it. The British anthropologist Rattray explained the significance of the Golden Stool and had it restored to the people. It represents the collective soul of the Ashanti nation. No one ever sits on it. It is so sacred that it is never laid down but always carried by attendants. Once every year the Ashanti ruler shows it to his people. It is conveyed under its own umbrella and surrounded by resplendent attendants. The Golden Stool of Ashanti was a wooden stool covered with gold. A ceremonial wooden stool of the Acholi tribe is an important exhibit in the African Collection. Another ceremonial object is the bull roarer. Like the Australians aborigines, the Bantu use bull roarers in the initiation of their youths. In addition to these ceremonial objects which they use in their religious ceremonies the men and women of these tribes have ceremonial dances and feasts to the accompaniment of music. The Sansa is a tribal musical instrument. It consists of metal keys fastened to a wooden resonator and the keys are plucked at the free end. Tobacco pipes used by the men are made of clay and wood.

The following interesting objects of the material culture of some of the East African tribes are exhibited as representative of African cattle culture. An artistically carved wooden milk pot of Hima tribe is made to resemble a gourd and is supported by a fibre net. The Ganda tribe is represented by a large fine specimen of bark cloth and a pair of tobacco pipes made of clay containers and wooden tubes. Arrow heads of the Amba tribe and spiked

wheel traps are the weapons of the chase and hunt. Sansa is the one characteristic musical instrument. Of the two cattle bells exhibited one is of tortoise shell and the other of palmyra seed. Ornaments include the arm rings and anklets of the Acholi and Amba and a lip plug of the Karamoja. Of the ceremonial objects is a Bantu bull roarer and ceremonial sacred wooden stool of the Acholi tribe.

Illustrations of the way of life of the Australian Aborigines, the Eskimo, the American Indian and the African pastoralists show that these peoples have remained isolated and at a level of culture far below that of civilised peoples. Active interference with their way of life in bringing them into the fold of civilisation have been followed by diasastrous results. The tribal peoples of India have fared better in this regard in having had a very slow and gradual contact with civilisation.

Folk Arts and Crafts.—Other ethnographic collections include primitive devices for making fire, jewellery, musical instruments, writing materials, objects used in ritual, worship and magical practices such as sorcery or witchcraft, votive offerings and toys representing mythological stories and characters like Yama's durbar, the churning of the ocean of milk and the avatars of Vishnu. Toys which are representative of folk art include the Thanjavur and Kondapalli toys, the brass images of the Bhuta shrines of Canara, the brass figures of the Khonds of Ganjam, the wooden and clay figures of the sea fisher folk of Orissa, and the clay figures of Gramadevatas of Thanjavur. Other unique exhibits in this series are the Kathakali figures, the Pavaikoothu of Kerala and the Bommalata of Andhra.

Fire making implements.—The making of fire by wood friction or by percussion of flint and steel is common among most tribal peoples. Wood friction is made use of to make fire in one of three types of implements. These are the fire drill, the fire saw (Fig. 29) and the fire piston. The simpler type of fire drill used by the Nayadis of Malabar and the Yanadis of Andhra, is worked by the twirling method (Fig. 28). There are two long slender pieces of wood one of which has a series of cylindrical depressions scooped out in it and into one of these pits the rounded end of the other stick fits in and twirls. The first piece is held on the ground horizontally with the sockets facing up in between the operator's feet while the other piece is held vertically in one of the sockets and twirled by the operator using both his palms. Some fine vegetable floss is used as tinder and this is kept in a hollowed out palmyra shell. In the other type of fire-drill both the pieces are stout and massive. The vertical piece is ribbed like a carpenter's drill and is rotated by churning it with a rope. The horizontal piece is held on the ground by one of the operators, who also holds the vertical

piece firmly in position by a cup made out of the half of a coconut shell while the other person churns with both his hands. The fire piston in which fire is produced by the vigorous compression of air is used by some of the tribes of Malaya. A number of iron fire pistons are among the collection of iron objects excavated from Adichanallur in Tirunelveli district. Rice husks used as tinder were found inside one of the fire pistons. The more common method of making fire by striking stone pieces such as flint or quartz with steel is met with among many primitive peoples like the Muduga of Kerala.

Jewellery.—The Museum collections of both rural and tribal jewellery exhibit a wide variety of designs and materials. The Kadar have ear discs of wood and pandanus leaves and make decorated bamboo combs. The highly bejewelled Lambadis have several anklets, armlets, bracelets and necklaces made of brass and ivory. The ornaments of the Todas include massive bracelets, anklets and chains of brass. They also have tassels fringed with cowry shells. The Kotas have varied ornaments of iron. Coloured glass beads, wood, fibre, coconut shells and bamboo are some of the materials which are largely used in making tribal jewellery. The Cherumas and Paniyas of Kerala and the nomad Koravas wear coloured glass bead necklaces in profusion Jewellery of baser metals like aluminium and brass are common in the form of necklaces of beads or kasus, anklets, bracelets, and necklets among several rural and tribal folk like the Malasar of Coimbatore and Muduga of Kerala. Though tribal jewellery consists at best of cheap trinklets, it is important in giving the tribesmen scope and outlet for the expression of their artistic talents and workmanship. On the other hand, rural and urban peoples wear jewellery of gold silver and precious stones in which they invest their savings. The peasant jewellery collections of this museum vary in their designs, styles and even materials according to the castes concerned and the regions in which they live. Thus the Moplas of Kerala wear mostly silver jewellery consisting of necklaces, waist belts and chatelaines with numerous pendants. The jewellery of the Nambudri Brahmans and the Syrian Christians which are worn mostly on ceremonial occasions such as marriages have much in common between them.

Writing Materials.—The art of writing on palm leaf cadjans with steel styles is very ancient and the entire written records of Indian literature at least during the last two millennia were written and preserved in this manner. There are also some documents written on bamboo pieces. Bark paper and linen account books have been used as substitutes for paper. The linen is blackened with charcoal paste and written on with soapstone pencils.

The large collections of steel styles in this museum includes many artistic forms and in some of them the style and knife for cutting palm leaves are combined into one piece.

Musical Instruments.—A representative collection of the principal types of musical instruments common in Southern India are classified under the srtinged, wind and percussion types and exhibited. Among these are the following unique exhibits. The ancient *Yazh* (யாழ்) described in Tamil classical literature had disappeared from Southern India long ago. Its modern representative is the Burmese Harp or *Saun*, a stringed instrument which has a boat-shaped reasonator and resembles the lyre (Fig 30). Another rare musical instrument is the *Pancha-Mukha-Vadyam*, a huge bronze drum with five faces which is used in temple music (Fig. 31). Yet another exhibit which is becoming popular at the present day is the *Villadi Vadyam*, a long bow with about a dozen bells attached to it and played by a number of men to the accompanient of a pot drum. The *Pulluvan Kudam* is used by the medicine men or soothsayers of Kerala in their invocation of the serpent God called ' Pamban Tullal '.

Votive Offerings.—An over sized pair of leather sandals made and offered by the Madigas or Telugu cobblers to the god Sri Venkateswara of Tirupathi is prominent among the votive offerings. Other silver pieces offered to gods and goddesses in fulfilment of vows and as thanks-giving offerings for recovery from serious illness, take the form of the part of the body affected. These are offered at important Hindu, Muslim and Christian shrines in India and abroad. Brass or clay figures of the tiger, leopard, elephant and boar are offered to Gods or Goddesses in Bhuta shrines in South Canara to protect crops and cattle. and to prevent or ward off epidemics.

Sorcery figures.—The Moplah sorcerers of Kerala are considered to be experts in such practices as casting out evil spirits. When a woman is possessed by an evil spirit, the sorcerer transfers the spirit by means of incantations to an image of the woman made of wood. The spirit is then secured to the wooden image by driving nails into it. It is then cast into the sea. Such figures have been washed ashore on the coast of Kerala, three of which are exhibited in this museum. One of them is a female figure incised on a flat wooden plank. Of the two others in the round, one is a larger life-size female figures studded all over with nails and the other a very small dwarfish figure.

Kathakali figures.—The celebrated dance drama of Kerala is illustrated by a set of the four principal character types which portray the leading roles (Fig. 25). The first of these is the sedate character *Pachai* (Green) of the great epic heroes like Dharmaputra and Arjuna who conform to the Apollonian way of life. The second *Kathi* (Sword) is the more imperial and royal character who is egocentric and megalomaniac in nature like Ravana and

Duryodhana. The third, *Thadi* (beard) is the character of the terrific demoniac role of the classical villain of the drama represented by such examples as Bakasura, Keechaka, or Dussasana. The fourth character *Stri* (Woman) simply represents one of the royal ladies such as Damayanti or Rukmani whose character roles are almost quite uniform so as to conform to a single type. These figures depict the actual costumes and makes up of the principal characters of the dramatic art of Kerala.

Shadow Play Figures.—The main dramatic entertainment in the South Indian village before the advent of motion pictures was the shadow play drama comparable to the puppet shows like Punch and Judy of England. This old fashioned theatrical show was probably introduced into Malabar from Thanjavur where the art of puppet figures in the round still survives. Here epic stories are dramatised and the characters are represented by flat leather figures, the sharp black and white shadows of which are thrown on a screen illuminated from behind. The figures are cut and punched out in silhouette, and attached to slender stems by which they are held and manipulated by the performers who stand behind the lights. The dramatic effect is heightened by a running commentary or dialogue kept up from behind the screen The Kerala shadowplay art is called *Pavaikoothu* (Fig. 32). The *Bommalata* figures of Andhra are made of thin parchment and are very beautifully coloured and they depict in our collection some of the principal characters of the Ramayana and the Mahabharatha (Fig. 33). The Wyang Wyang of Java which is grotesque and exotic is said to show influences of the South Indian art which has wide ramifications. A further addition to this collection are some very remarkable shadow play figures from Indo-China depicting such scenes and characters as the Temple at Angkor Vat, Kumbakarna, Thadagai, Jadayou, Aprastri and a Maharishi It is interesting to note that this art extends also to China.

Human Biology.

Human Biology or Physical Anthropology studies the biology, evolution and genetics of man. As man is subject to the same laws of the physical and biological world he is studied here as an animal species in his biological environment.

Races.—The broad divisions of mankind called races are illustrated by photographs and actual specimens of the skulls of the Caucasoid, Mongoloid, Negroid and Australoid types. Charts, photographs and specimens illustrate such variation as skull forms, hair colour and form, eye form and colour and skin colour.

Primates.—Illustrating the relation of man and the primates are a series of skulls of (monkeys) apes and man. These show the progressive reduction in the size of the teeth, jaws, and the length of the snout, the increase in skull capacity and brain size and the establishment of the erect posture. Among the skulls represented are the macaque, the langur, the chimpanzee, the orangutans and the gorilla.

The monkeys and apes represent divergent lines of evolution. They are not directly ancestral to man. Man is derived from a third evolutionary line represented by the extinct Propliopithecus of Egypt and the Dryopithecus series of Siwalik ages. The primates come under three groups (1) the man apes of South Africa or the Australopithecinae, (2) the ape men (Pithecanthropus) of Java and China and (3) the Neanderthal man of Europe.

The South African man apes.—These had a brain size of about 600 c c. Their face, jaws, and teeth show human features. They walked erect. They cannot have been the ancestors of man because true men lived at the same time in other parts of the world (Figs. 34 and 36).

The Ape men of Java and China.—They represent the side lines in the evolution of man. They belong to the Pithecanthropus group. They walked erect, had large brains over 900 c.c. in size, were distinctly human in that they made and used stone tools. Their jaws projecting forward, large canine teeth, sloping foreheads and skulls were, however, ape-like. They had prominent eye brow ridges and were without chins (Fig. 35).

The Neanderthal men.—They lived in caves mostly in Europe and made excellent stone tools. They had ape-like narrow skulls with prominent occiputs, large brow ridges, chinless projecting jaws, and large teeth. The brain was larger than that of modern man ranging between 1,300 and 1,600 C.C. The posture was erect but given to much stooping and squatting. Neanderthal man lived side by side with modern man in many places and the two species interbred (Fig. 37).

Modern man.—He is not a uniform homogeneous type. He exhibits great diversity even at the earliest time of his appearance. Three of these diverse types give early indications of the three principal racial types of mankind. The Cro-Magnon is associated with the modern Caucasoid and Grimaldi with the Negroid, and the Chancelade with the Mongoloid.

An introductory set of exhibits illustrate human biology and the evolution of man. This consists of the skulls of the man-like apes and plaster cast restorations of the skulls and reconstructions of the brains of the races of early men like Pithecanthropus, Neanderthal and Cro-Magnon men. The races of mankind are represented by skull types representing the Mediterranean, Mongoloid, Negroid and Australoid peoples. Included in this set is a cast of a Vedda face in which the Veddid or Australoid type is seen at its best. .This is the most predominent type in the aboriginal population of Peninsular India being characteristic of the Bhils of Bombay, the Gonds of the Madya Pradesh, the Chenchus of Andhra Pradesh, the Malasar of Coimbatore and the Paniyans of Kerala. The Veddas are a primitive tribe of food gatherers and hunters living in small family groups in rock shelters in Ceylon who are fast disappearing.

Fig. 1 Palaeoliths from South India.

Fig. 2 Neoliths from South India.

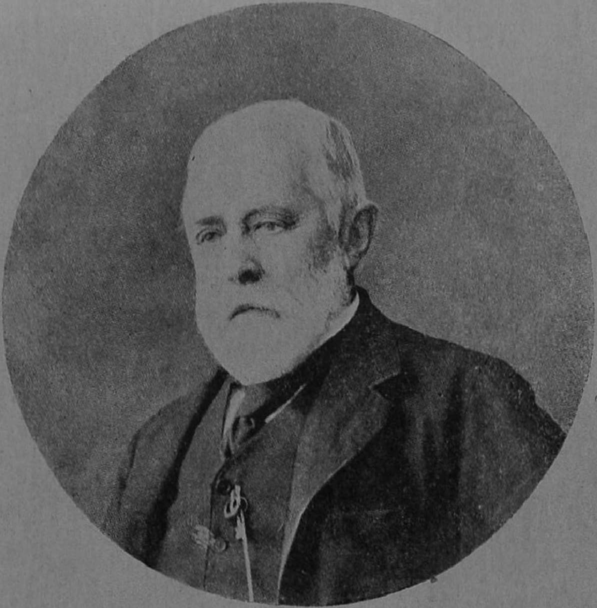

FIG. 3 ROBERT BRUCE FOOTE ; FATHER OF INDIAN PRE-HISTORY.

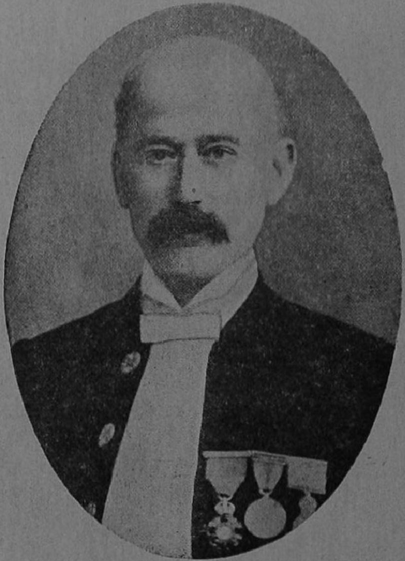

FIG. 4 DR. EDGAR THURSTON; F.R.C.S.
ETHNOLOGIST.

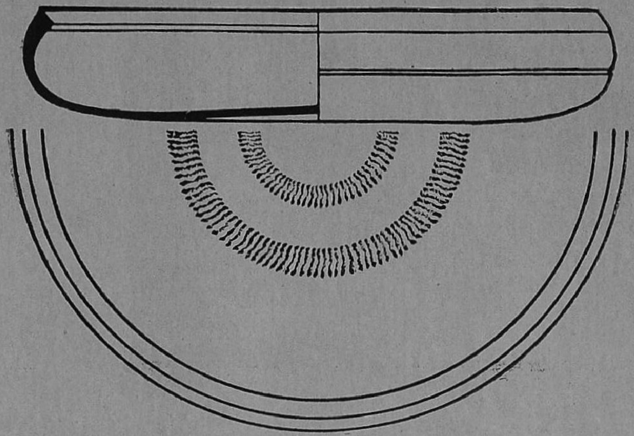

FIG. 5 ARRETINE ROULETTED WARE FROM ARIKAMEDU NEAR PONDICHERY.

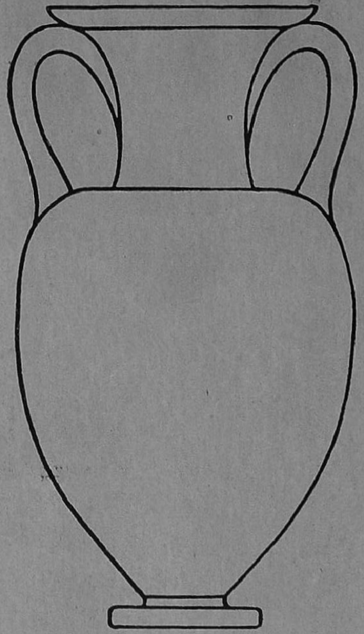

FIG. 6 AMPHORA. A TWO-HANDLED WINE JAR IMPORTED INTO INDIA 1ST. C. BC TO 1ST. C. AD.

FIG. 7 KADAR WOMAN FROM ANAMALAI HILLS.

FIG. 8 MALAI VEDAN MAN.
(Note the chipping of teeth for beautification.)

FIG. 9 THANDA PULAYA WOMAN.
(Note the sedge apron.)

FIG. 10 ULLADAN MAN USING A CROSS-BOW.

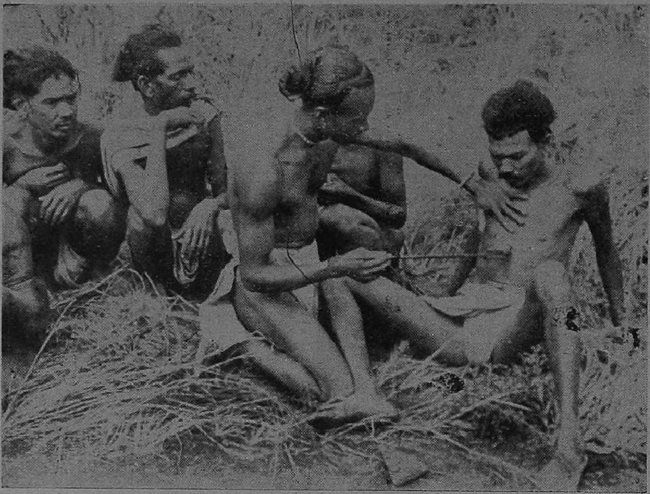

FIG. 11 KHOND SHAMAN TREATING A PATIENT WITH AN ARROW.

FIG. 12 TODA HALF-BARREL TYPE HUTS KNOWN AS MANDS—FROM NILAGIRI.

FIG. 13 KOTA WOMAN MAKING POTTERY WITH A TOURNETTE.

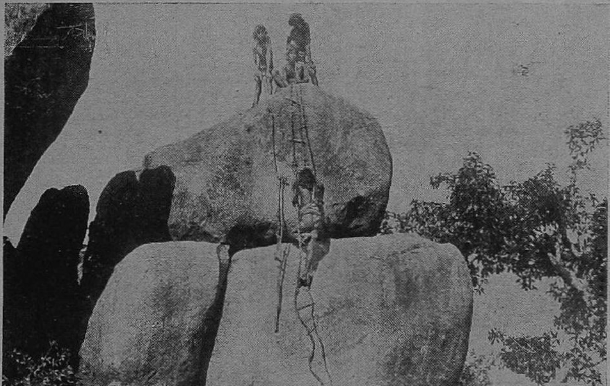

FIG. 14 IRULAS CLIMBING A STEEP ROCK FACE WITH A FIBRE LADDER FOR COLLECTING HONEY.

FIG. 15 CHENCHUS OF ANDHRA PRADESH USING BOW AND ARROWS.

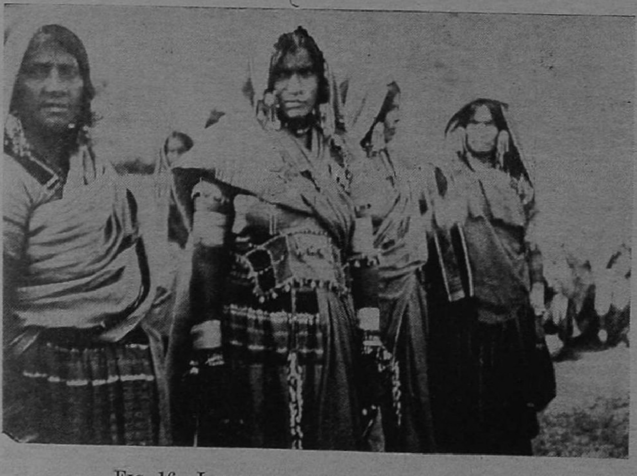

FIG. 16 LAMBADI WOMEN FROM TELANGANA.

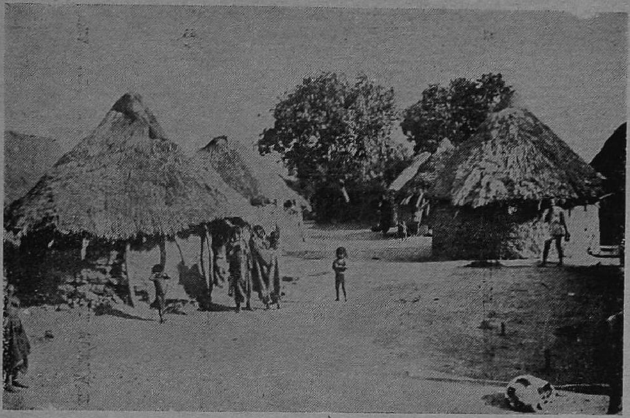

FIG. 17 LAMBADI SETTLEMENT FROM TELANGANA.

FIG. 18 GADABA WOMAN AT HER LOOM—GANJAM, ORISSA.

Fig. 19 Gadaba woman of Orissa.

Fig. 20 Khond men of Ganjam, Orissa, preparing for, a bison dance.

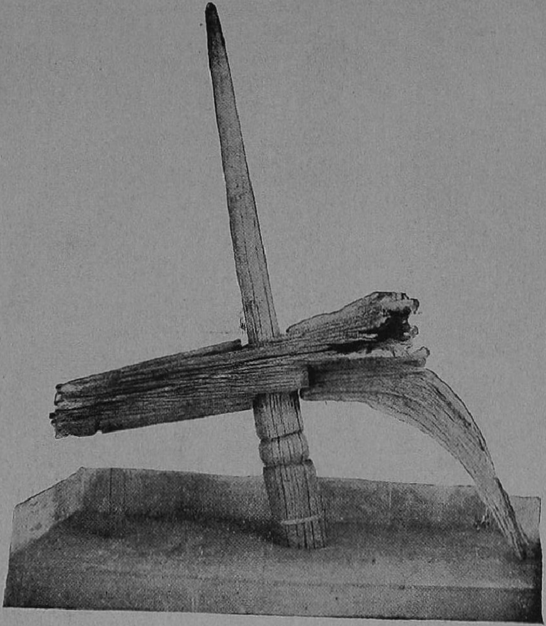

FIG. 21 MERIAH SACRIFICE POST FROM KHONDS OF GANJAM, ORISSA.

FIG. 22 SAORA WOMAN OF VISHAKAPATNAM.

FIG. 23 SAORA WOMEN OF VISHAKAPATNAM.

FIG. 24 KOYA WOMEN FROM GODAVARI.
(Note the flower decoration in the ear.)

Fig. 25 Kathakali figures from Kerala: (1) Pachai, (2) Kathi, (3) Stri and (4) Thadi.

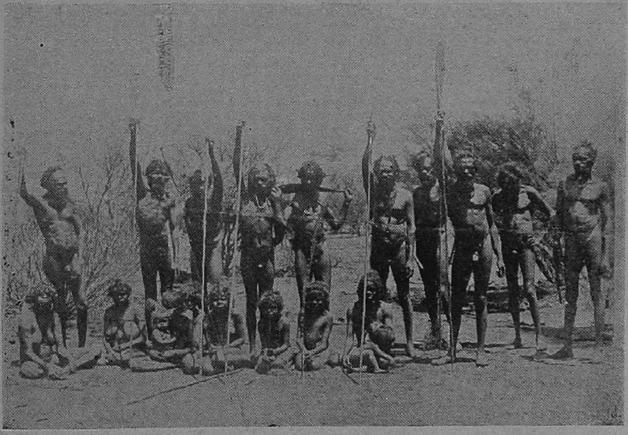

Fig. 26 Australian Aborigines.

FIG. 27 AMERICAN INDIAN WARRIOR.

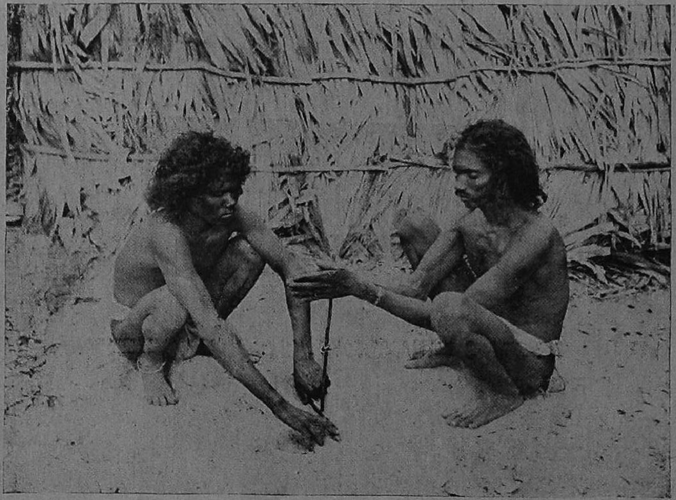

FIG. 28 YENADIS OF NELLORE MAKING FIRE WITH A FIRE DRILL.

FIG. 29 PANIANS OF KERALA MAKING FIRE WITH A FIRE SAW.

FIG. 30 BURMESE SAUN (HARP).

FIG. 31 PANCHAMUKHA VADYAM—FIVE-FACED BRONZE DRUM USED IN TEMPLES.

FIG. 32 LEATHER SHADOW PLAY FIGURE FROM KERALA: FIGURE OF RAMA.

FIG. 33 LEATHER SHADOW PLAY FIGURE FROM ANDHRA: FIGURE OF SITA.

FIG. 34 MODEL OF AUSTRALOPITHECUS AFRICANUS.

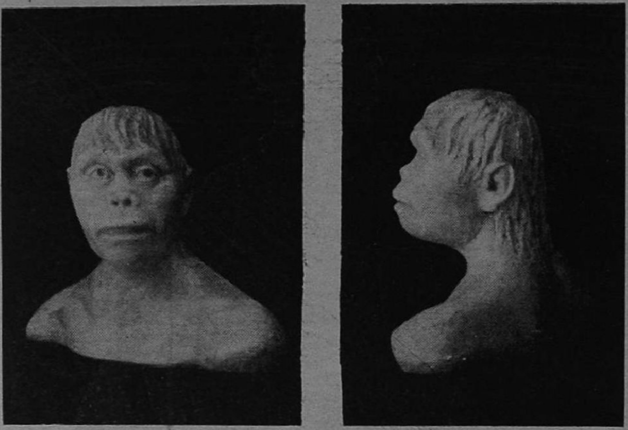

FIG. 35 SINANTHROPUS PEKINENSIS (FEMALE)—BUST MODEL.

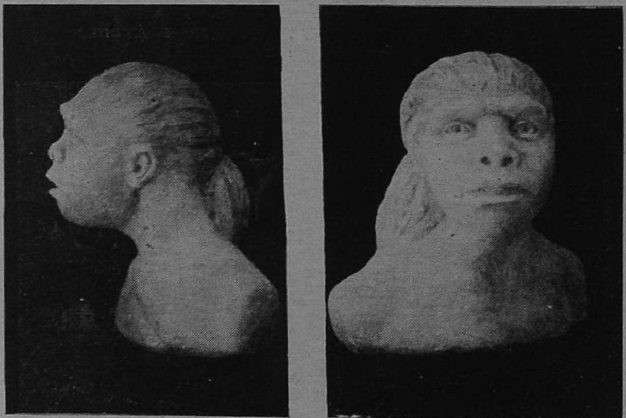

FIG. 36 AUSTRALOPITHECUS PROMETHEUS—THE SO-CALLED FIRE-MAKING PRE-HOMINID.

FIG. 37 HOMO-NEANDERTHALENSIS—THE NEANDERTHAL MAN. MODEL FROM LA CHAPELLE-AUX-SAINTS: FOSSIL.